



K4GSO.us

The Oracle

Newsletter of the Silver Springs Radio Club

Oldest Radio Club in Marion County, FL



February 2022

President's Message

Bill Gillespie, KW5BG

I know some of you made it to Hamcation because we saw you. :-). Hopefully many more were able to make it on Saturday or Sunday. We talked with some of our hamfest vendors, spent some more money with them and took a step toward my goal of learning a bit about DMR. Hopefully your visit was just as fruitful.

Speaking of DMR, we are getting closer to having our own repeater. Part of that project was getting dedicated internet access, which we now have. As part of that project a number of folks stepped forward and agreed to help fund it, with a nominal contribution each month. Most were willing to contribute \$10/month. It's now time to start getting those contributions to the treasurer. We would appreciate contributions be made on a minimum of a quarterly basis. Thanks for your help!

We received some good news about GCH. The county facilities director came by a short while ago and took a tour of our portion of GCH and has committed to replacing the ceiling lighting and make sure the electrical system is up to code. We expect that to occur within the next month. Once we get a firm date, we will need some folks to help clearing out the radio room to give them full access. We'll send out an email when we need you. And thanks to Andy, NA4DA, for being at the right place at the right time!

This month's Operating Day will be related to RTTY. The North American QSO Party (NAQP) RTTY runs from Feb 26 1800 UTC (1300 L) to 0600 UTC Feb 27. In order to give everyone an opportunity to participate, folks will be available Sat morning to help you configure your equipment. Bring your radio and computer and there will be someone to help you get set to run RTTY, and have plenty of time to get home to participate. No need to bring an antenna as we will use those at GCH. If you are proficient at RTTY, please come help. It will allow us to help the most people in the shortest time.

Next Meeting

Tuesday, February 15

***** Green Clover Hall *****

319 SE 26th Terrace, Ocala

6:00 PM Mentoring & Socializing

7:00 PM Meeting

**Program: Contesting with N1MM+
Bruce Richards, WA4IPU**

SSRC Board of Directors first Tuesday, 7:00 PM,
Green Clover Hall

Upcoming Events

February 26— Operating Day
Getting Ready for NAQP RTTY

VE Testing — March 8, 7 PM (GCH)

March 26 — Marion County Day

Silver Springs Radio Club Net

K4GSO Repeater

Mondays at 7:30 PM

146.610, PL 123

Continued on next page....

Elbert will have more to say about membership renewal, but please help us close this out so our time can be better spent!

Lastly, we are working on a few projects that will help us put our club in front of the public. Right of the top, there is the Marion County Day in March, the North Central Florida Expo and Light Up Ocala late November. Keep these dates in mind to help us man the radios.

Membership/Hamfest

Elbert Wilkinson, KQ3K

Hamfest & Membership Chairman

MEMBERSHIP:

It is me again...I'm back to nag, cajole, berate and otherwise stay on your case to get your membership renewals done. Remember, dues were due by January 31 and we are at about 50%. I know – we have some slow pokes out there, so don't delay. For those of you who renewed early or during January – a BIG THANK YOU!

The online application is currently being revised and simplified. Carl has heard my pleas and hopefully, this will work out better for everyone with a more user-friendly layout. There will be several things you will need to know. One (and should anyway) is your FCC License Expiration date. Why, you ask? Because you don't want it to lapse and we can help remind you to renew it and full voting membership is only open to currently licensed amateurs. Another is when and how your dues were paid.

Again, we are asking older members to adopt a new member, especially those recently licensed. This is important. We can all remember the challenge of trying to set-up a station, getting on the air, working an event or making a resonant antenna. That's just the simple stuff! It can be overwhelming. New members and amateurs – please don't be shy about asking for help. We may not know what you are struggling with unless you tell us.

Finally and on a sad note, the club lost another member, Pete Castella, N4CQN, who passed away in January following a long illness. Please keep Pete's family in your thoughts and prayers.

MARION COUNTY DAY 2022:

As reported last month, our county will be having a community wide celebration on Saturday, March 26 at the McPherson Governmental Complex. Due to the pandemic, last year's event was cancelled. There will be lots of vendors, displays, other participants and

hopefully large crowds to enjoy an early spring day outside. SSRC has submitted its application and plans to set-up a couple of stations to demonstrate our skills and portable emergency operations to the public. Mark your calendars to attend and participate in this club event. More details to follow at club meetings and in [The Oracle](#).

HAMFEST 2022:

Save the date – December 2nd for setup and December 3rd for Hamfest. Location will again be at First Christian Church, Ocala. Stay tuned to [The Oracle](#) and club

Upcoming Programs

February - Bruce WA1IPU Contesting with N1MM+

March - Kevin Young, KC7FPF, HRD

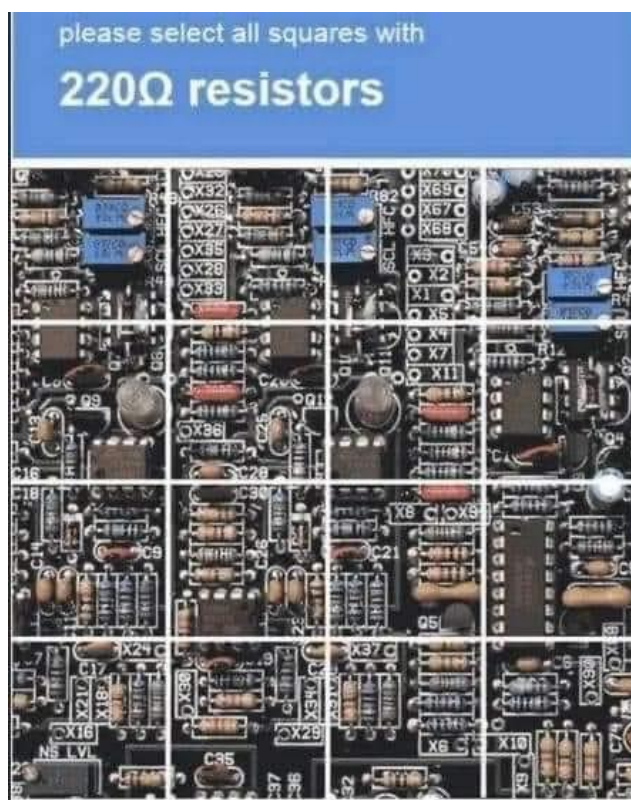
April – SETI, The Search for Extraterrestrial Intelligence, with information on the WOW signal picked up by the Ohio State University's Big Ear Observatory in 1977. Presented electronically by Bob Dixon W8ERD.

May - Dr. Ed Fong – antennas UHF/VHF

June – Field Day & TBA

July – DX Engineering, Tim Duffy, K3LR, Grounding and Bonding

New Spam Checker from KC5CMX



Pete Castella, N4CQN (SK)

Bert Garcia, N8NN

Editor's Note: My thanks to Bert for sharing Pete's wife's message.

I am sending this email right after WFD has finished. I don't know everyone in the club and don't have all the email addresses but I just wanted to let you know that Pete (N4CQN) passed away this morning after a long struggle. He almost made it to die at home in his bed as he wished, but had to be transported back to ER by ambulance about 6:00 AM today since he fell out of bed and we had to call 911. Anna and I followed the ambulance there and he died shortly thereafter. He was more prepared and excited for this field day than ever before and I think the preparations for that event pulled him through some tough times. He had a rough time these past six months, rallying sometimes and taking a couple of steps backward at others. He fought to the end but I think he is at peace now. Please notify anyone I don't know and let me know if there is anything else I need to do. Hope the club made lots of contacts yesterday and today!

Ginny Castella



Q CODES FOR 2022

Thanks, Elbert, KQ3K



QLD	I AM IN LOCK DOWN
QUA	I AM QUARANTINED
QPD	I AM IN THE MIDDLE OF PANDEMIC
QTP	I HAVE TOILET PAPER
QHG	I NEED A HUG
QSH	I AM SHELTERING AT HOME
QHS	I HAVE HAND SANITIZER
QSD	I AM SOCIAL DISTANCING
QCV!	I HAVE COVID
QWH	I HAVE WASHED MY HANDS
QWH?	HAVE YOU WASHED YOUR HANDS
QSS	STAY SAFE



Contesting Calendar from the Carolina DX Association

Bill Gillespie, KW5BG

CDXA Periodic Table of Contests - 2022

January	February	March	April	May	June	July	August	September	October	November	December
8 R RTTY Roundup 1800	5 CSRD VT QSO Party 0000	5 S ARRL DX - SSB 0000	2 CSRD LA QSO Party 1400	7 CSRD 7th Area QSO Party 1300	4 CSRD KY QSO Party 1400	1 CS RAC Canada Day 0000	6 C NAQP - CW 1800	3 C CWops Open 0000	1 CS CA QSO Party 1800	5 S NA Sprint - SSB 0000	2 CS ARRL - 160M 2200
15 C NAQP - CW 1800	5 CSRD MN QSO Party 1400	12 CSRD OK QSO Party 1400	3 CSRD MS QSO Party TBD	7 CS IN QSO Party 1800	11 CSRD ARRL - VHF 1800	9 CS IARU 1200	13 C WAE DX - CW 0000	3 CSRD CO QSO Party 1300	8 R Makrothen - RTTY 0000	5 C Sweepstakes - CW 2100	3 D FT Roundup 1800
22 S NAQP - SSB 1800	5 CSRD BC QSO Party 1800	12 C Stew Perry TBC 1500	2 CSRD MO QSO Party TBD	7 CSRD DE QSO Party 1700	18 C Stew Perry TBC 1500	16 CSRD CQWW - VHF 1800	13 CSRD MDC QSO Party 1400	4 CSRD TN QSO Party 1800	8 CSRD NV QSO Party 0000	12 R WAE DX - RTTY 0000	10 CS ARRL - 10M 0000
15 CSRD ARRL - VHF 1900	5 C NA Sprint - CW 2300	12 CSRD ID QSO Party 1800	4 S NA Sprint - SSB 0000	7 CSRD New England QSO Party 2000	18 CSRD WV QSO Party 1800	10 CS IARU 1200	20 S NAQP - SSB 1800	10 S WAE DX - SSB 0000	8 CSRD AZ QSO Party 1500	19 S Sweepstakes - SSB 2100	17 CS RAC Winter 0000
22 R BARTG RTTY 1200	12 R CQWW WPX - RTTY 0000	12 R NA Sprint - RTTY 2300	TBD D FT(n) DX 1200	14 CSRD AR QSO Party 1400	Mondays C K1USN Test 0000	16 R NAQP - RTTY 1800	27 CSRD HI QSO Party 0400	10 CSRD ARRL - VHF 1800	8 CSRD PA QSO Party 1800	26 C CQWW - CW 0000	23 C Stew Perry TBC 1900
28 C CQ - 160M CW 2200	19 C ARRL DX - CW 0000	13 CSRD WI QSO Party 1800	9 CSRD NM QSO Party 1400	28 C CQWW WPX - CW 0000	Fridays C K1USN Test 2000	30 CS RSGB IOTA 1200	27 D WW Digi DX 1200	10 CS AL QSO Party 1900	8 CSRD SD QSO Party 1800	Mondays C K1USN Test 0000	Mondays C K1USN Test 0000
Mondays C K1USN Test 0000	25 S CQ - 160M SSB 2200	19 R BARTG RTTY 0000	9 CS GA QSO Party 1800	Mondays C K1USN Test 0000	Mondays C K1USN Test 0000	27 CS OH QSO Party 1800	11 C NA Sprint - CW 0000	15 CSRD NY QSO Party 1400	15 CSRD Stew Perry TBC 1500	Fridays C K1USN Test 2000	Fridays C K1USN Test 2000
Fridays C K1USN Test 2000	26 CSRD SC QSO Party 1500	26 S CQWW WPX - SSB 0000	TBD CSRD ND QSO Party TBD	Fridays C K1USN Test 2000	Fridays C K1USN Test 2000	27 CSRD KS QSO Party 1400	17 CSRD IA QSO Party 1400	17 CSRD Worked All Germany 1500	17 CSRD TX QSO Party 1400	15 C IL QSO Party 1700	
	26 R NAQP - RTTY 1800		18 R CQMM DX 0900			Mondays C K1USN Test 0000	17 CSRD NH QSO Party 1600	15 C Stew Perry TBC 1500	17 CSRD TX QSO Party 1400	15 C IL QSO Party 1700	
	27 CSRD NC QSO Party 1500		16 CS MI QSO Party 1800			Fridays C K1USN Test 2000	17 CSRD TX QSO Party 1400	16 CSRD IL QSO Party 1700	17 CS NJ QSO Party 1600	29 S CQWW - SSB 0000	
	Mondays C K1USN Test 0000		16 CS ON QSO Party 1800				17 CSRD WA Salmon Run 1800	15 C K1USN Test 0000	17 CSRD WA Salmon Run 1800	Mondays C K1USN Test 2000	
	Fridays C K1USN Test 2000		30 CS FL QSO Party 1800				18 R NA Sprint - RTTY 0000	Fridays C K1USN Test 2000	18 R NA Sprint - RTTY 0000	Fridays C K1USN Test 2000	
			Mondays C K1USN Test 0000				24 R CQWW - RTTY 0000		24 CS ME QSO 1200		
			Fridays C K1USN Test 2000				24 CS ME QSO 1200		Mondays C K1USN Test 0000		
									Fridays C K1USN Test 2000		

LEGEND
 GOLD = Major Contest= 10 points
 Blue = QSO Party= 7 points
 Pink = DX Contest = 5 points
 C = CW S = SSB
 R = RTTY D = Digital

DATE → 1 | CSRD ← Mode
 NAQP ← Contest Name
 1200 ← Start Time

Some Thoughts about Antennas

Bert Garcia N8NN

Every antenna system is a compromise. Compromises are imposed by space limitations, financial limitations, restrictions by the HOA, neighbors, and the XYL. This discussion is focused on HF antennas, and it applies to commercial antennas or antennas you construct. Here are some thoughts about methods to produce an effective HF antenna system.

1. Build or adjust your antenna to match 50 ohm coax AT THE ANTENNA FEEDPOINT. This will present a good match to your 50 ohm transceiver output. The goal is to have no antenna tuner at the radio. When your antenna is matched to the feedline, you have no feedline radiation and feedline losses are minimized. Methods for adjusting your antenna to match 50 ohms include changing the length of the antenna, using a hairpin, stub, loading coil, or tuned network. Depending on the type of antenna, use a balun or unun to transform the antenna impedance closer to 50 ohms. Use an SWR meter or antenna analyzer at the antenna feedpoint to measure your success at achieving a 50 ohm match.

2. Single-band antennas can easily be matched to 50 ohms; however, many multi-band antennas can be difficult to achieve a 50 ohm match on all bands simultaneously. For example, with a multi-band end-fed wire antenna you can choose a compromise wire length and use a 9:1 unun to achieve a reasonable match on multiple bands. Balun Designs [1] has published several charts for selecting end-fed antenna wire lengths when using a 9:1 unun [2].

Recommended Wire Lengths for 9:1 ratio (in feet) for 160m to 10m. Lengths of 53 feet and 124.5 feet provide the best overall compromise for low SWR.

53	59	72	88.5	98.5	124.5	146	162	175
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Recommended Wire Lengths for 9:1 ratio (in feet) for 40m to 6m:

36	44	49
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The wire lengths in the charts do not provide a 50 ohm match but can easily be matched with most transceiver built-in antenna tuners. You can use a remote antenna tuner at the antenna feedpoint to match 50 ohms and minimize feedline loss. Using an antenna tuner is a compromise you may not be able to avoid with multi-band antennas.

3. Use quality coax. Manufacturer's specifications will tell you the dB loss per 100 ft at various frequencies, allowing you to make a price/performance compromise. Some typical coax loss specifications are shown in this table:

Loss per 100 ft at 28 MHz							
Coax Type	RG-58	RG-8X	RG-8	RG-213	LMR 400	LMR 600	7/8" Helix
dB Power Lost	2.5	2.0	0.9	1.0	0.7	0.4	0.195
Power Lost	43%	37%	19%	20%	15%	9%	4%

Data from various manufacturers

Coax feedline losses have two components – the loss in a matched system and the additional loss due to an SWR greater than 1:1. The loss values in the table are for a matched system; that is, the antenna input impedance is 50 ohms. When the antenna is not matched to the coax, the losses due to the SWR are greater. You can use the on-line calculator provided by KV5R to determine total coax loss [3].

4. Don't be obsessed with obtaining a 1:1 SWR at the antenna feedpoint. An SWR of 2:1 at the radio represents an 11% loss of power to the antenna [4]. If you achieve an SWR of 1.5:1, your power loss is only 4%. A power loss of 4% would not be noticed on the air. Your transceiver built-in antenna tuner will allow the radio to see a 50 ohm

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load; however, the power loss still remains in the feedline as heat. An antenna tuner at the radio does not correct for power lost in the feedline. The goal is to bring the SWR down as low as possible by adjustments at the antenna. Correct the mismatch before it gets to the coax.

5. A 1:1 SWR does not mean you have an efficient antenna system. For example, a ground mounted 1/4-wave vertical over a perfect ground system has an input impedance of 36 ohms, and this is a mismatch to 50 ohm coax. A perfect 1/4-wave vertical will have an SWR of 1.4:1 with 50 ohm coax. If you measure a 1:1 SWR you may think everything is OK, but in reality, you have a poor ground system and about 50% of your RF is going into heating the ground! Add radials to improve your ground system. Twenty radials will decrease the losses to about 30%. Sixty radials will lower the losses to less than 10%. An extensive radial system can be costly, so you have a cost/performance compromise to consider. Ground radials may be less than a 1/4 wavelength long and still be effective. Numerous short radials are better than a few long ones.

The impedance of a perfect half-wave dipole is 73 ohms. With 50 ohm coax that's an SWR of 1.46:1. The impedance of a real dipole will vary with the height above ground from 45 to 93 ohms, so expect the SWR to vary. Placing loading coils in the dipole or using a section of open wire feedline as a matching stub can achieve a match to 50 ohm coax. These are both single-band solutions. Don't forget to use a balun with unbalanced coax feeding a balanced dipole. Everything is a compromise.

7. Previously, I installed an antenna farm for all bands 160 meters to 3/4 meters with no antenna tuners in the shack. All antennas were coax fed. Each antenna was matched to 50 ohm coax at the antenna feedpoint to present an SWR of 1.5:1 or less on the entire band, except for a 40 meter yagi which was 2:1 or below on 7.0 to 7.2 MHz. No remote automatic antenna tuners were used. A motor driven capacitor for 160 and 80 meters allowed tuning to a 1:1 SWR across the entire bands. All baluns were 5 KW from Balun Designs.

Whether you live on a postage stamp sized HOA lot or on a 10 acre antenna paradise, all antennas will be a compromise to that ideal free-space radiator. Make good choices and get on the air!

Band in meters	Antenna Type	Matching Network at the Antenna Feedpoint
160	Half-Bazooka Inverted-L	Motor driven capacitor, 400 pF
80	Inverted-L	Motor driven capacitor, 400 pF
80/40	Trap Vertical	Shunt coil, 18 turns, 2-in diameter
40	3-element Yagi	Hairpin, Balun, 7.0 – 7.2 MHz below 2:1 SWR
30/17/12	1/2/2-element Yagi	Hairpin, Balun
20/15/10	2/2/2-element Yagi	Balun
6	3-element Yagi	T-match
2	5-element Vertical Yagi	Gamma-match
1-1/4	4 Vertical Dipole Phased Array	none
3/4	3-element Vertical Yagi	Gamma-match

References:

1. Balun Designs, <https://www.balundesigns.com/>.
2. Recommended End-Fed Wire Lengths, <https://www.balundesigns.com/content/Wire%20Lengths%20for%204%20and%209-1%20ununs.pdf>.
3. KV5R Coax Loss Calculator, <https://kv5r.com/ham-radio/coax-loss-calculator/>.
4. Power Loss Table, http://www.firestik.com/Tech_Docs/SWRLOSS.htm.
5. ARRL Handbook, <https://www.arrl.org/shop/ARRL-Handbook-2022-Softcover/>.
6. ARRL Antenna Book, <https://www.arrl.org/shop/ARRL-Antenna-Book-Softcover/>.
7. Small Antennas for Small Spaces, <https://www.arrl.org/shop/Small-Antennas-for-Small-Spaces-2nd-Edition/>.

Up, Up, and Away! – Darrell / KG4CCB

During a recent WSPR monitoring session on 20-meters I noted that transmissions from a few balloons had been received. A few were received by my FT-818 with 14AVQ vertical antenna and two with my IC-7300 with DX-CC dipole antenna during the initial 24-hours of the monitoring session.

- The FT-818 received balloons over Russia, Turkey, Kazakhstan, and the Indian Ocean. Those balloons identified as OB3ZDV, OB3DDH, and OD3JQX (near each other over Russia); OB3DDH (later over Kazakhstan); OB3DDF (over Indian Ocean near Singapore); OB3DDC (over Turkey), and OB3DDD near Madagascar. Their altitude varied from 20m to 1,020m.
- The IC-7300 received 1Z2DKG (5mw) over the Pacific Ocean southwest of Mexico and QJ0BZW (altitude 11,840m) over the Arctic Ocean.
- Over the course of 72 hours, transmissions from numerous additional balloons were also received.



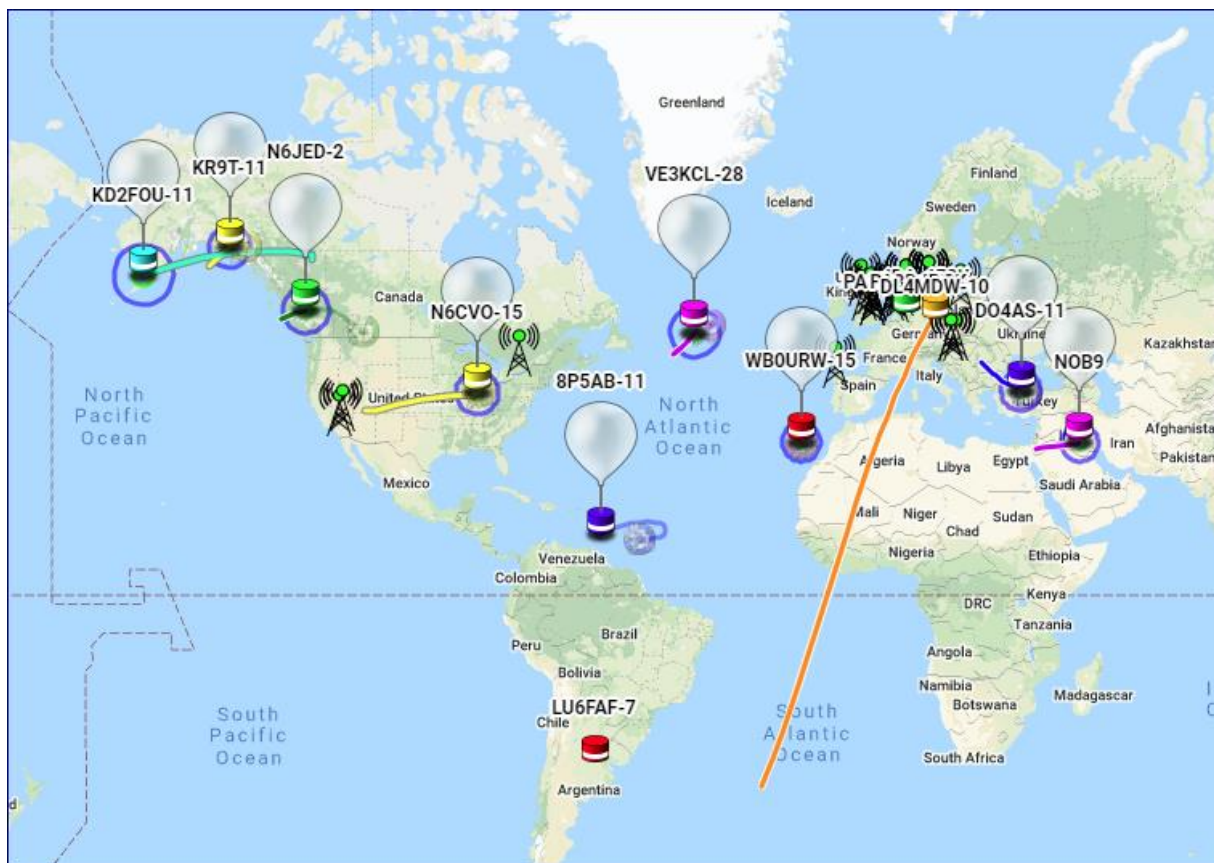
Though I spent some time searching for information using these call signs, I was initially unable to locate any. The identifiers associated with the balloons were not recognized by qrz.com as valid call signs. The DXMaps website recognized the identifiers but provided no information other than a grid location.

[Just as a side note, during a 72-hour period the IC-7300 / DX-CC dipole received 8,773 transmissions while the FT-818 / 14AVQ vertical received 14,451.]

The Weather Channel website talks about weather balloons, indicating they are released from nearly 900 sites worldwide simultaneously on a twice daily basis. Check out this link to a short video of such a balloon launch in Dallas / Ft. Worth. <https://www.youtube.com/watch?v=-2-7S4OpbYk>

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During my search I came upon the (High Altitude Balloon hub) habhub.org website that has a map depicting various balloon locations and paths of travel. The map below depicts the previous 24-hour period as of 2/6/2022.



Another interesting website is the Amateur Radio Experimenters Group (AREG) in Australia. <https://www.areg.org.au/archives/category/activities/project-horus> The website details the Horus 55 balloon flight performed in March 2021 which transmitted live video of the flight on 445.0 MHz. Quite impressive!

In north Illinois, a group of teens and adults launched a pico-balloon (KR9T) on January 26, 2022, at noon. This is their 9th launch. As of this writing on February 6 their balloon is off the coast of Alaska and Canada as depicted by the map above. This group of balloon enthusiasts have named themselves the Northern Illinois Bottlecap Balloon Brigade (NIBBB). The balloon is nearing completion of its circumnavigation of the Earth. Its journey is well documented on their website, <https://nibbb.org>



From left to right, Cary Willis KD9ITO, Burt Krain KR9T, Michael Seedman AA6DY, David Kaplan, Elizabeth Ziemer KD9ORR, Natalie Tran, Bill Fiely, Henry Fiely KD9SRZ, Noah Berg KD9RDT, and Bob Berg KD9RDU

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Various ham clubs have worked with local schools to involve the students in balloon launches, sometimes as part of STEM projects. The Augusta Chronicle reported on one such activity last May involving the Amateur Radio Club of Columbia County (SC) and the Savannah River Academy.

<https://www.augustachronicle.com/story/news/education/2021/05/06/columbia-county-radio-club-partners-grovetown-students-launch-weather-balloons-talk-astronauts/4962559001/>

The Nashua Area Radio Society worked with the Hollis-Brookline High School in Hollis, NH to launch a balloon back in June 2019. See <https://stationproject.blog/tag/high-altitude-balloon-project/> and <https://www.n1fd.org/2019/06/07/hab-4-launch/> for additional information. Be sure to watch the Ham Nation Episode 430 video, "Fred & Anita with the Club of the Year."

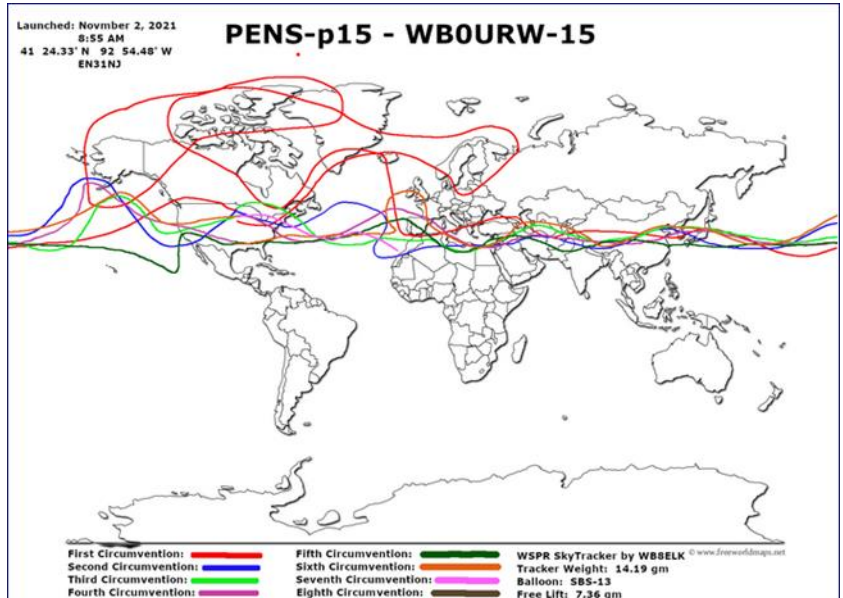
Another ham, whose balloon is depicted on the map above is WBOURW. His balloon shown off the west coast of Morocco is a project with a local middle school science class. The balloon is currently on its 7th (or 8th) trip around the world as depicted by this map.

This is all new to me and therefore this article only scratches the surface of ham radio and ballooning as I snoop around to learn more. There are a variety of balloon sizes, payloads, flight objectives, transmitting modes, and such yet to be discovered by me.

In the end, I thought to contact the "Master" WB8ELK, Bill Brown. He was given that title in a May 2017 QST article, "Bill Brown, WB8ELK:

Master of High-Altitude Balloon Projects." He has made presentations on his activities in recent QSO Today Virtual Ham Expos. Bill reports that the OB3xxx callsigns are used by VE3KCL for his WSPR pico balloon flights. The QX7xxx callsign is used by W5KUB. Bill did not know who is using the 051xxx callsign. The QST article can be found here: <http://www.arrl.org/files/file/QST/This%20Month%20in%20QST/May2017/GLIFORT.pdf>

Greg Lane, N4KGL, will be making a presentation in the March 12-13 QSO Today Virtual Ham Expo titled, "APRS Picoballoon Flight by a Rank Amateur."



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My Radio Doesn't Work

Bert Garcia N8NN

Many times, I've received a phone call from a friend saying, "My radio doesn't work." The conversation usually continues with me asking, "How do you know it doesn't work?" My friend describes a symptom and then says he *guessed* it was this and *guessed* it was that, and he wants me to give him some better *guesses*. But *guessing* is not an effective troubleshooting strategy, especially when you change things to test your *guesses*. A better troubleshooting strategy is to separate your station into parts that can each be tested and then reassembled. I'll describe that strategy here for a typical ham station.

A modern ham station consists of the radio, the antenna system, a computer, and software programs. You may also have an amplifier and other accessories. Your radio, computer, and software have numerous menus and settings that need to be correct. To get started, you will need a dummy load and an SWR/Wattmeter for the troubleshooting steps. If you don't own those items, you can probably borrow them from a friend. If you suspect you have antenna problems, you will find an antenna analyzer helpful.

While troubleshooting, take notes on the physical connections and make a permanent record of all the menu and software settings. This record will be useful in the future if you have problems, and you can use it during your troubleshooting process to revert to a known good state when something doesn't work as expected.

Start by disconnecting your radio from everything, then connect the power supply, SWR/wattmeter, dummy load, microphone, and CW key. Test your radio on all bands and modes and confirm you have RF output. If you are not successful with this test, try resetting your radio to factory conditions – but first record all your menu settings and memories to save time as you reassemble your station. When you are sure your radio is operating correctly, you can proceed with more troubleshooting.

Next, connect your antenna system in place of the dummy load and confirm that you have RF output and an acceptable SWR. Perform this test in all modes and bands that your station can operate. With your radio and antenna system operating, you can have a local ham confirm that you have good audio and a good CW note.

The next step is to connect your computer to your radio. Since there are several types of computer operating systems and many radio brands, I will assume you have a Windows computer for this discussion. Your radio may require an interface accessory between your radio and computer if it does not have a USB connection. Some radios require special device driver software installed on your computer. In Windows use the Device Manager to confirm that your radio's COM port is recognized. You can unplug the USB cable and reconnect it while observing the Device Manager to confirm your radio is recognized by your computer. Record the radio COM Port number or numbers if you have more than one COM Port.

Open one of your favorite software programs that operate with your radio, such as HRD, WSTJ-X, FLDigi, or a logging program. You can find help for the settings needed in your radio menu and in the software program on the Internet, manuals, and from friends. At a minimum, you need to set the same Baud Rate in your radio and your software, and the same COM Port in both. If your radio doesn't switch to transmit mode, look at the PTT settings for COM Port and RTS/DTR. If your radio switches to transmit but there is no power out, look at the Com Port for the audio or the audio cables between your computer and radio. Check your radio menu settings for the audio input selection which can be either the front mic connector or the rear digital connector or the USB cable. Once you have all the settings correct, record the settings. Continue by adding your accessories one at a time and confirming you are still operating correctly.

By separating your radio station into parts that can be checked individually, you can zero in on your problem. Good luck with your troubleshooting!

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by K4XRY

SSRC
Members

10%
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DINO BYTES

**Computer Repair (PC, Mac & Chrome)
Data Recovery and Device Security
VHS Conversion & Custom PC Building**

SSRC Classified Ads

This month we are experimenting with a classified ad section. The SSRC Board of Directors has agreed to allow business advertising in The Oracle. If you have a business service and want to place an ad in this section, contact Marty Brown, n4gl.marty@gmail.com.

At this time we are not charging for advertising space, however the board may approve fees in the future.

This section is not intended for radio equipment. Those items can be listed on the website at no charge <https://k4gso.us/traders/>

2022 SSRC Officers

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Committee Chairs

[Membership – Elbert Wilkinson, KQ3K](#)
[Trustee K4GSO – Wayne Brown, N4FP](#)
[Newsletter – Marty Brown, N4GL](#)